

18. A map display engine according to claim 16, said map display engine computing four adjacent data file names, fetching said files from a server and combining the information contained in said files to generate map pictures on the display screen;
19. A map display engine according to claim 16, said map display engine fetching floor plans of buildings as the user enters the lowest zoom levels;
20. An apparatus according to claim 16 comprising means for permanent storage;
21. An apparatus according to claim 20, where the map display engine is configured to allow local caching of data files up until a preset amount of local permanent storage space is filled, at which point a caching algorithm determines which files should be replaced;
22. An apparatus according to claim 20, where the map display always checks the local cache first before requesting data from a remote server;

ACCA17

*Abstract of the Disclosure*

A method for organizing and compressing spatial data to enable fast, incremental downloads of spatial data over a network. The method comprises multiple steps for segmenting and reducing spatial data, and introduces a location-relevant naming system for storing and accessing the data. Applications installed on remote devices are able to efficiently compute data file names based solely on location information, download the data over a network and cache the data on the device.